

Responses for CSI magazine – 4K satellite, deployments overview

By: Bernard Riera, Director of New Technologies and Innovation, Globecast

- **Should satellite operators look to launch 4K ultra HD?**

The situation today regarding the arrival of Ultra-HD (UHD) could be easily compared with the introduction of HD ten years ago. For a media solution provider like Globecast, the deployment of a new standard provides the opportunity to review and upgrade solutions and facilities and to introduce more innovation. UHD is the next step towards to a more immersive consumer experience, not only because of more pixels but also because of “better pixels”. It needs to be seen as an important component of in an overall evolution of the landscape also driven by more interactivity, more screens, more personalisation. This makes TV an amazing 21st century experience.

But of course there are challenges. At the network level the arrival of UHD channels means the updating of our encoding and modulation capabilities, assuming UHD will take advantage of new generation HEVC codecs and new modulation schemes like DVB S2 and DVB S2X. At this stage we don't see any expanded satellite bandwidth consumption as the introduction of new technologies, in combination with the decrease of SD channels, will more or less compensate the bandwidth needs of UHD.

At the media management level, our playout and associated post-production facilities are being upgraded to handle UHD, which is challenging of course but entirely achievable.

- **What benefits would this offer customers?**

The most obvious benefit of UHD for the end-users is linked to the overall video experience. UHD is not just a case of more pixels, it is the perfect tool for a more immersive experience, including more realistic colours and a new sound approach, all of which contribute to an

amazing show. For this reason UHD matches the customer expectations for premium content perfectly. It comes into its own in the context of live shows, premium sports events, movies and documentaries.

A second benefit, more long-term benefit is the format's capability for new usages thank to the very high spatial definition of UHD. I'm thinking along the lines of an interactive experience where the end-user could select a part of the UHD picture in order to personalise the content, but still enjoy a final quality that's equivalent to an HD picture. Sport event coverage is a good example of this, where the end-user could select a part of the video frame depending on their specific interest in a particular player. Of course, the tools to achieve this would need to be developed; at present they exist in the professional sphere but there are no consumer equivalents as yet.

- **Is there the customer demand to cover the initial investment to make this happen?**

Again, it looks like this will be similar to HD: early adopters will be eager for the benefit of better picture quality, but with a long tail following that up. At this point, we need to keep in mind the delay between the introduction of a new TV standard and widespread deployment. Then there are the issues of both technology and pricing at the consumer level. In the next two years we don't see a huge amount of UHD channels broadcasting, mainly because of the need to finance the renewal of set-top boxes and the lack of UHD content. Nevertheless, we expect to see some new UHD channels broadcast over Europe, North America and Asia from 2016.

OTT delivery, especially through SVoD, offers a short-term opportunity for UHD deployment wherever consumers have the benefit of high enough bandwidth.

- **Is 4K ultra HD the killer app that DTH operators have been waiting for, if so why?**

At this stage I am not sure we can consider UHD as the killer app for DTH operators for several reasons:

Firstly, this is due to the time delay between the introduction of a new video standard and the widespread commercial deployment of this standard. Considering HD as an example, while it

is now considered mainstream, there are still numerous SD TV channels on air. This is primarily due to the cost of STB renewal which would need to be undertaken by the bouquet's operators. What is new in 2015 is that for the first time we will have three different digital video standards available at the same time (SD, HD and UHD) which from an economical and operational point of view, is just not viable.

Second, there have been huge changes within the video ecosystem in the last few years. We have seen significant increases in broadband OTT distribution not only for non-linear (VoD) but also linear content distribution. Given the rate of consumer take up, it's not hard to imagine that existing SD DTH channels will move across to broadband distribution, for economical reason if nothing else, freeing up resources on DTH satellites especially on premium DTH orbital positions.

Third, there have been several technological advances related to the optimisation of video coding and signal modulation. Today's technical improvements, thanks to new HEVC video codecs and next generation modulation (DVB-S2), allow you to distribute an UHD TV channel on the same spectral resource as an HD channel using H264/DVB-S technologies.

- **Is there a reason why this technology is being pushed more in some territories than others?**

With new technology that requires consumers and service suppliers across the chain to spend or invest in there will always be discrepancies across the world in terms of deployment and take-up. We only have to look – again – at HD deployment to see how uneven that is across the world and therefore how uneven Ultra-HD is likely to be.

Not only are the geographic disparities, but also differences across content sectors: sport is an area in which there is going to be obvious interest, news coverage less so.